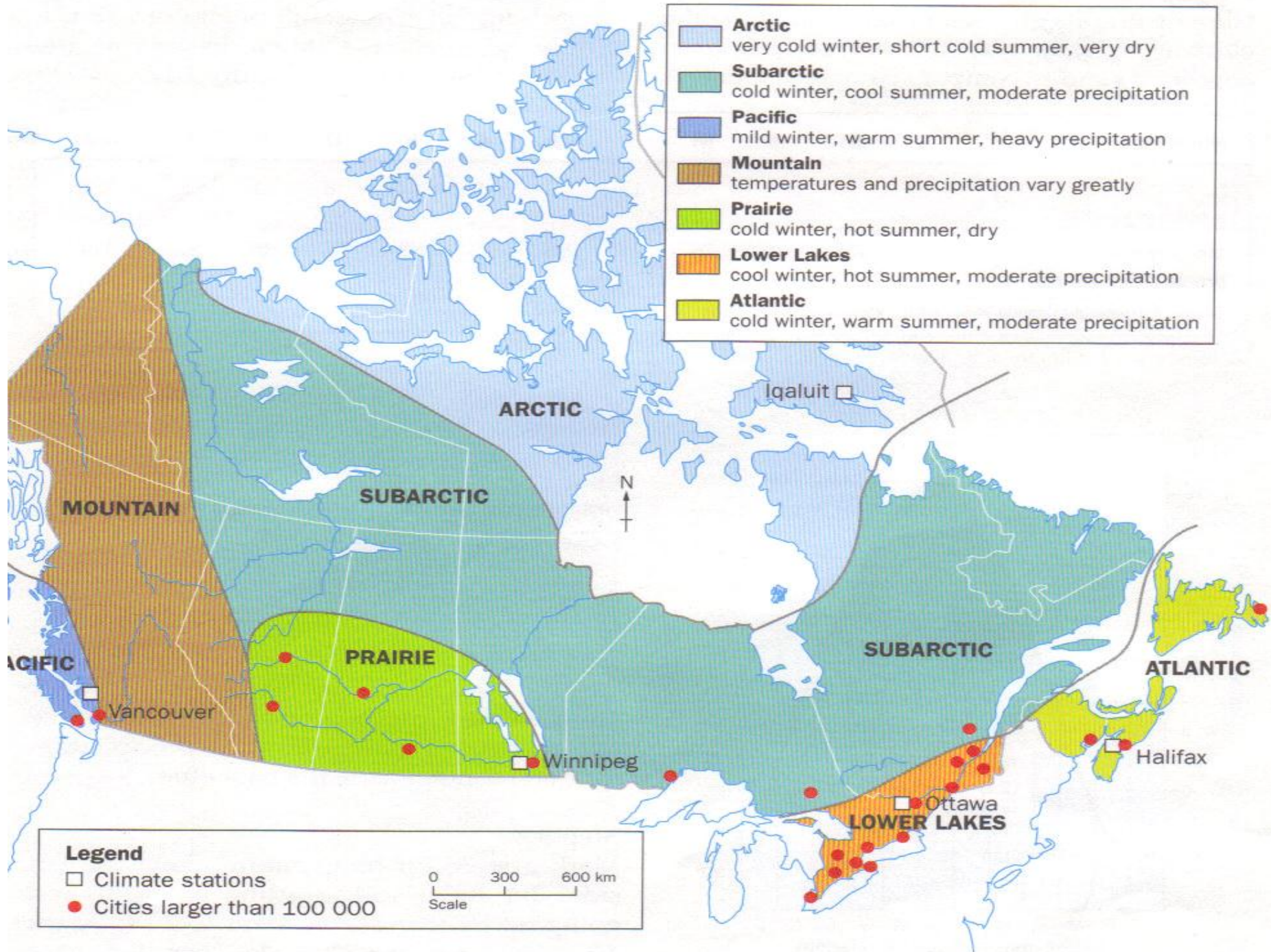


1.4 Understanding Climate Patterns- Arctic Climate





Arctic Climate- Nunavut, Northern Quebec, NWT



Arctic Climate

- The central Arctic Ocean is ice-covered year-round, and snow and ice are present on land for most of the year



Arctic Climate

- The climate within the Circle is very cold and much of the area is always covered with ice.
- In the mid winter months, the sun never rises and temperatures can easily reach lows of - 50



Arctic Climate

- In the summer months (further south), 24 hours of sunlight a day



- The Sunlight melts the seas and topsoil, and is the main cause of icebergs breaking off from the frozen north and floating south, causing havoc in the shipping lanes of the north Atlantic.

Arctic Climate

- Strong surface winds occur resulting in a severe wind-chill, and abundant drifting snow in winter.



Arctic Climate

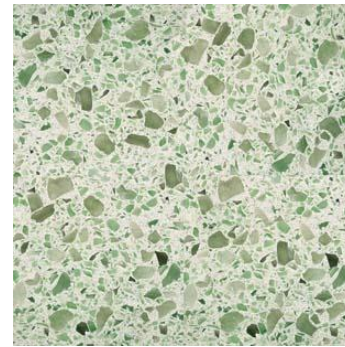
- Instead of tree growth there is tundra vegetation that includes grasses, sedges, mosses, lichens, and shrubs...all low-standing plants that exist on permafrost soils that are frozen solid throughout most of the year.

Arctic Climate

- Sedges



- Mosses



- Lichens



- Arctic Shrubs



Arctic Climate

- In terms of marine life, because the waters of the Arctic are permanently covered with a layer of drifting pack ice, sunlight never deeply penetrates the surface waters to nourish and encourage biological growth

Loss of Arctic sea ice...



changes atmospheric
pressure and winds...



potentially resulting in more severe winter
storms in the eastern US and Eurasia



Arctic Animals- Caribou

- Members of the deer Family
- Their thick fur coats have hollow hairs.
- This helps to keep them warm
- They move across the Arctic in large herds



Arctic Animals- Caribou

- Caribou eat moss, lichens and green plants
- For the winter they go to the forests of the south where trees give them protection from the wind and the snow
- In the spring the caribou leave the forests and go to the tundra where the calves are born.

Arctic Animals- Wolves

- *Tundra wolves* live on the mainland
- They have a thick undercoat of soft fur and an overcoat of long, thick hair.
- To help reduce heat loss, they have smaller more-rounded ears, a shorter muzzle and shorter legs than other wolves.



Arctic Animals- Wolves

- *Arctic wolves* live farther north on the islands
- Arctic wolves are smaller and white in colour.
- Wolves hunt in small packs



Arctic Animals- Wolves

- Arctic wolves hunt musk oxen, caribou and arctic hares.
- They also eat lemmings, birds and ground squirrels.

Arctic Animals- Arctic Fox

- It has a thick white coat of fur for the winter
- In the summer the coat is brownish-grey.
- If there is a lot of food the female may have eleven or more pups
- If there is not a lot of food the female may only have 5 or 6 .



Arctic Animals- Polar Bears

- have a thick oily fur coat and a layer of blubber under their skin
- they spend most of their time on the pack ice or in the water, where they can hunt their favorite food - the ringed seal.



Arctic Animals- Polar Bears

- The white fur helps the bear sneak up on seals that are laying on the ice.
- before summer arrives, the bears eat as much as they can to fatten up, then live off the fat in their bodies
- The females digs a den in the snow to hibernate during the worst part of the winter. The cubs are born in the den.

Arctic Animals- Harp Seals

- have their pups in early spring
- They crawl out on the ice to give birth to their pups
- For a few days the baby harp seals wear fluffy white coats of fur.



Arctic Animals- Harp Seals

- Within two weeks, their coats turn dark grey.
- When the ice melts the harp seals swim north following the schools of fish.

Arctic Animals- Walrus

- has to eat thousands of krill and shellfish each day



- With its thick whiskers, the walrus feels around in the water for krill and on the ocean floor for shellfish.

Arctic Animals- Walrus

- Layers of blubber protect the walruses when they swim in the freezing Arctic seas and when they lie out on the ice in the bitter cold wind.
- Walruses are very noisy animals
- They are often seen crowded together on ice floes or on the shore.

Arctic Animals- Other Animals

- Musk Oxen



- Wolverine



- Ermines



- Lemmings



Arctic Animals- Other Animals

- Arctic Hare



- Arctic ground squirrels



- Snowy Owl



Arctic Animals- Other Animals

- Whales

